SONNET

MECANIQUE

PLANCHES





PREMIERS ÉLÉMENTS

DE MÉCANIQUE

APPLIQUÉE

PLANCHES

AVIS DE L'ÉDITEUR :

Tout exemplaire de cet ouvrage non revêtu de ma griffe sera réputé contrefait.

L. Hachette

Paris. — Typographie de Firmin Didot Frères, rue Jacob, 56.

PREMIERS ELÉMENTS

DE MÉCANIQUE

APPLIQUÉE

COMPRENANT

1° La Théorie des Machines simples en mouvement
2° Des Notions générales sur les Machines composées

PAR H^te SONNET

DOCTEUR ÈS SCIENCES
RÉPÉTITEUR DE MÉCANIQUE A L'ÉCOLE CENTRALE DES ARTS ET MANUFACTURES

PLANCHES

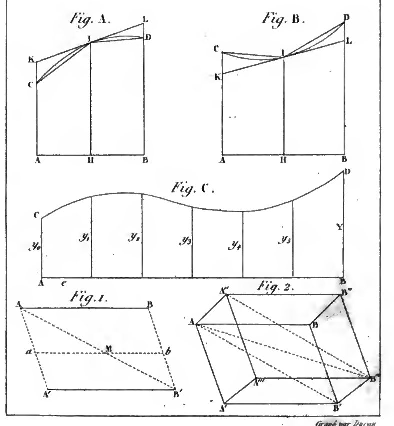
PARIS
CHEZ L. HACHETTE
LIBRAIRE DE L'UNIVERSITÉ ROYALE DE FRANCE
RUE PIERRE-SARRAZIN, 12

1843

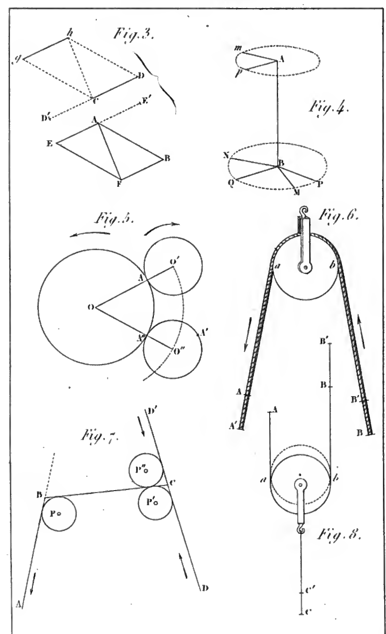
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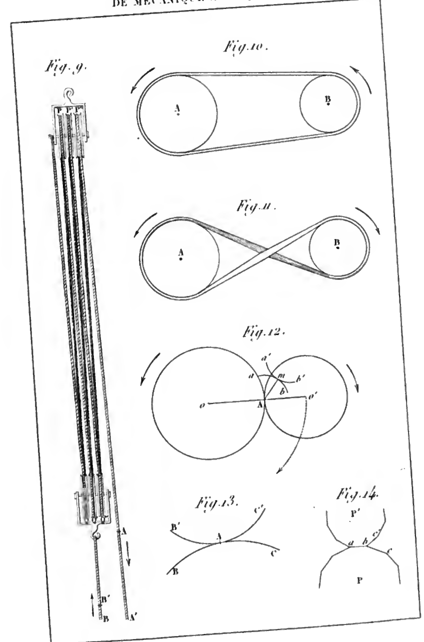
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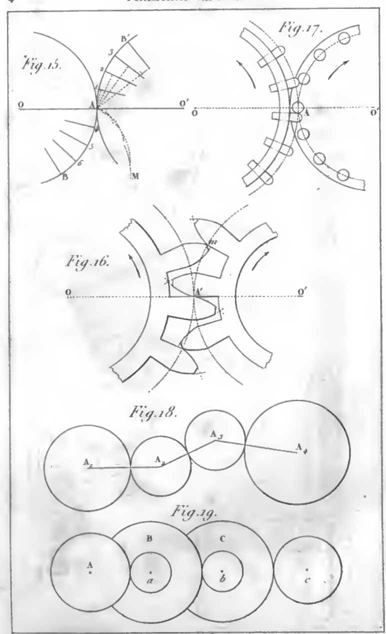
PLANCHES.

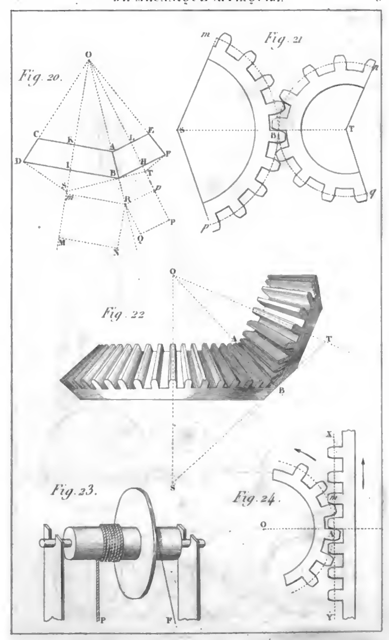


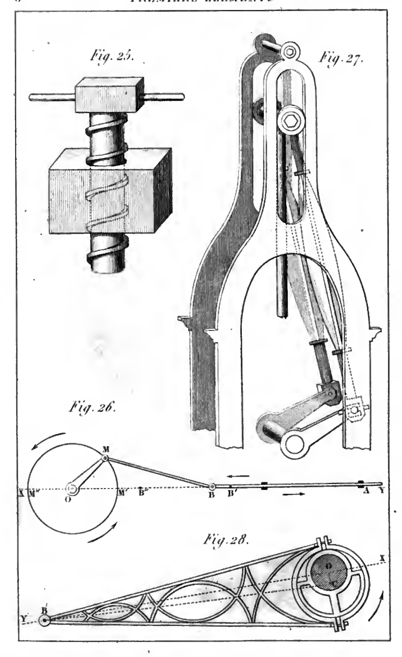
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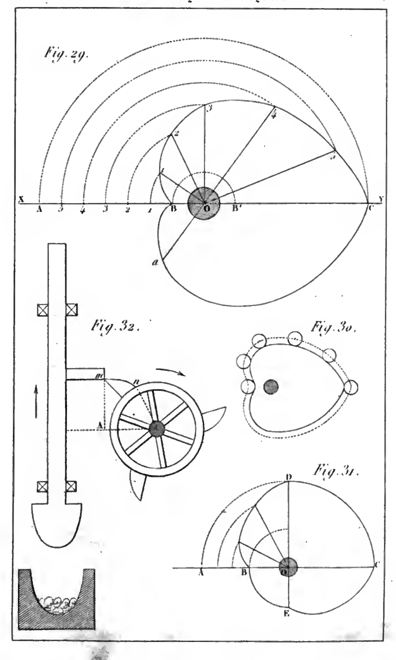

Fig. 3.
h
g
D
C
D'
E'
A
E
B
F
Fig. 4.
m
A
p
N
B
Q
M
P
Fig. 5.
O'
A
O
A''
A'
O''
Fig. 6.
a
b
B'
B
A
B'
A'
B
Fig. 7.
D'
P''
C
B
P'
P
A
D
Fig. 8.
A
a
b
C'
C

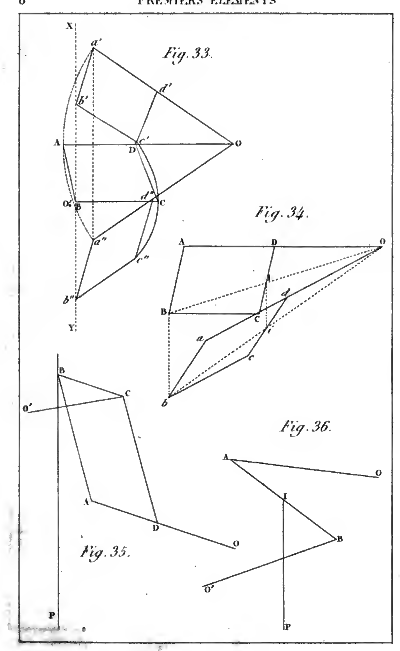

Fig. 9.
P P P
A
B'
B
A'
Fig. 10.
A
B
Fig. 11.
A
B
Fig. 12.
a'
a
m
b'
b
o
A
o'
Fig. 13.
B'
A
C'
C
B
Fig. 14.
P'
a
b
c'
c
P


Fig. 15.
O
O'
A
B'
B
M
Fig. 17.
A
Fig. 16.
A'
m
Fig. 18.
A_1
A_2
A_3
A_4
Fig. 19.
A
B
C
a
b
c


Fig. 20.
O
C
K
A
L
E
D
I
B
H
F
S
T
m
R
p
M
N
Q
P
Fig. 21
m
n
S
B
T
p
q
Fig. 22
O
A
T
B
S
Fig. 23.
P
P'
Fig. 24.
X
m
O
A
Y


Fig. 25.
Fig. 27.
Fig. 26.
M
X
M''
O
M'
B''
B
B'
A
Y
Fig. 28.
X
O
C
B'
Y'


Fig. 29.
X
A
5
4
3
2
1
B
O
B'
C
Y
a
Fig. 32.
m
n
A
Fig. 30.
Fig. 31.
D
A
B
O
C
E


Fig. 33.
X
a'
d'
b'
A
D
c'
O
O'
B
d''
C
a''
c''
b''
Y
Fig. 34.
A
D
O
I
d
B
C
a
i
c
b
B
C
O'
A
D
O
Fig. 35.
P
Fig. 36.
A
O
I
B
O'
P

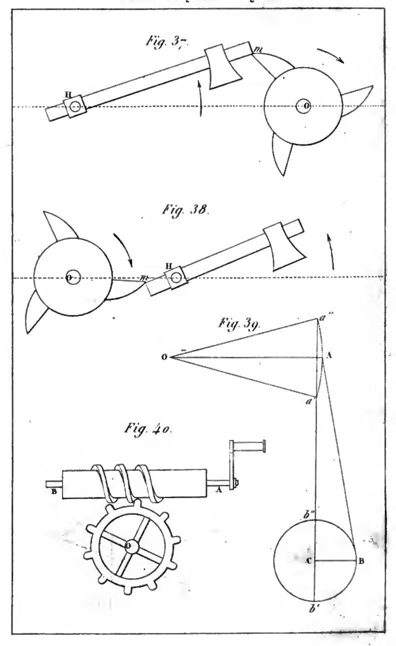

Fig. 37.
m
H
O
Fig. 38.
O
m
H
Fig. 39.
a''
O
A
a'
Fig. 40.
B
A
O
b''
C
B
b'

Fig. 41.

A D O A'
B C
C'
P
O' B'

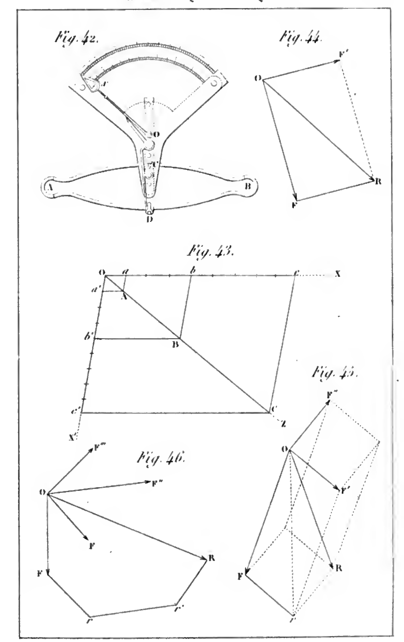
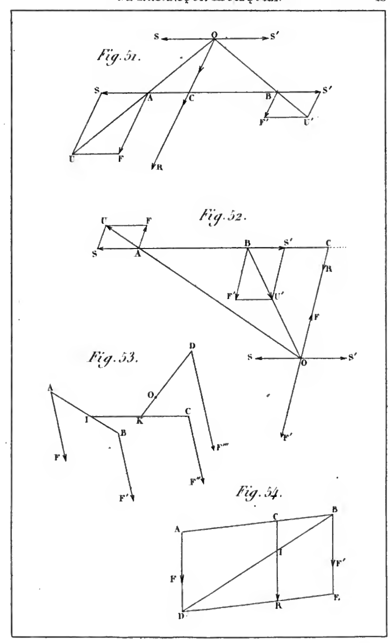

Fig. 42.
A
B
D
O
Fig. 44.
O
F'
R
F
Fig. 43.
O
a
b
c
X
a'
A
b'
B
C
c'
X'
Z
Fig. 45.
F''
O
F'
R
F
Fig. 46.
F'''
F''
O
F
R
F
f
f'

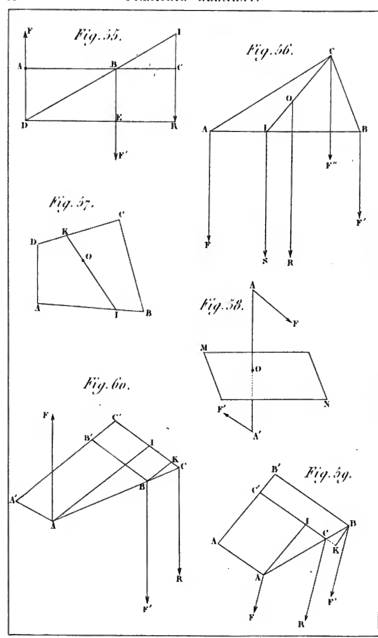
Fig. 47.

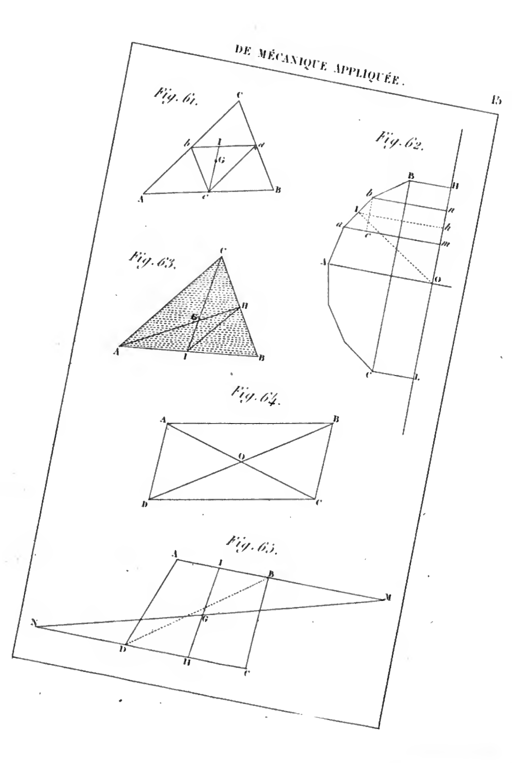
Fig. 49.

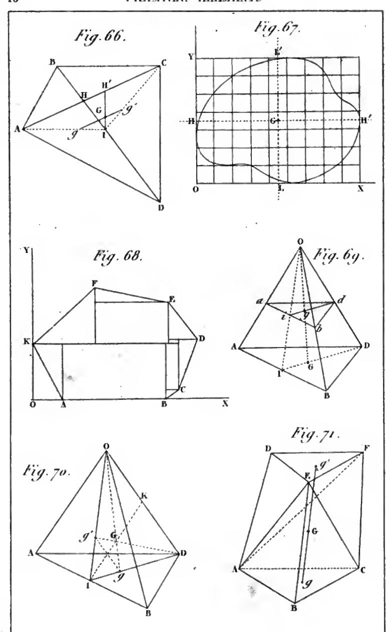
Fig. 48

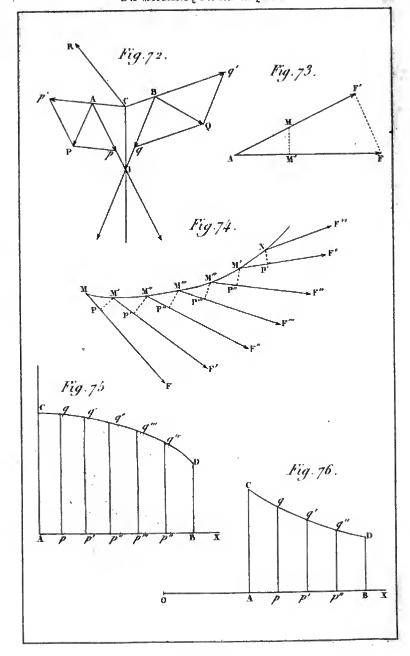
Fig. 50.

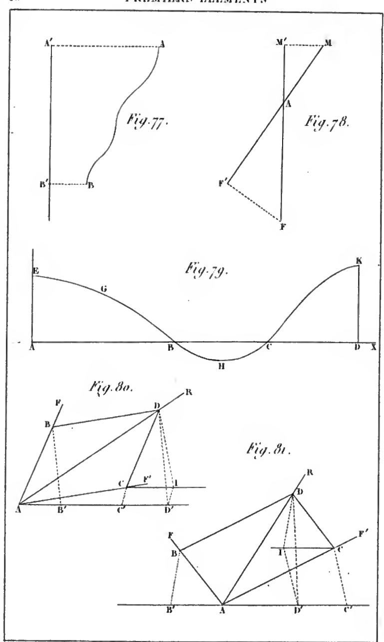

Fig. 51.
S
O
S′
S
A
C
B
S′
F″
U′
U
F
R
Fig. 52.
U
F
S
A
B
S′
C
R
F′
U′
F
S
O
S′
F′
Fig. 53.
D
O
A
I
K
C
B
F
F‴
F″
F′
Fig. 54.
C
B
A
I
F′
F
R
E
D

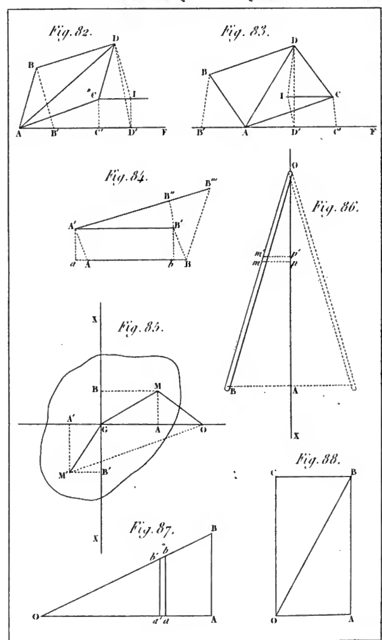

Fig. 55.
F
A
B
C
I
D
E
R
F'
Fig. 56.
C
O
A
I
B
F''
F
S
R
F'
Fig. 57.
C
K
D
O
A
J
B
Fig. 58.
A
F
M
O
F'
N
A'
Fig. 60.
F
C'
B'
I
K
C
A'
B
A
R
F'
Fig. 59.
B'
C'
I
B
A
C
K
A
F'
F
R

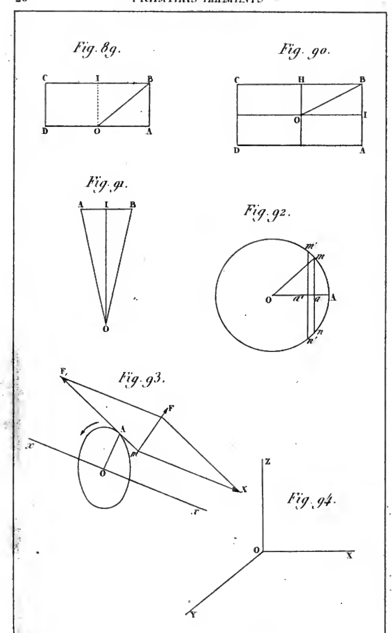

Fig. 61.
C
b
I
d
G
A
c
B
Fig. 62.
B
H
b
n
I
h
a
c
m
A
O
C
L
Fig. 63.
C
H
G
A
I
B
Fig. 64.
A
B
O
D
C
Fig. 65.
A
I
B
M
N
G
D
H
C


Fig. 66.
B
C
H'
H
G
g'
A
g
I
D
Fig. 67.
Y
E'
H
G
H'
O
L
X
Fig. 68.
Y
F
E
K
D
C
O
A
B
X
O
Fig. 69.
a
d
i
g
b
A
D
I
G
B
Fig. 70.
O
K
A
g'
G
D
I
g
B
Fig. 71.
D
F
g'
E
G
A
C
g
B


Fig. 72.
R
p'
A
C
B
q'
Q
P
p
q
I
Fig. 73.
F'
M
A
M'
F
Fig. 74.
F'''
N
F'
M'
P'
M''''
P''
F''
M
M'
M''
M'''
P'''
P
P'
P''
F'''
F''
F'
F
Fig. 75
C
q
q'
q''
q'''
q''
D
A
p
p'
p''
p'''
p''
B
X
Fig. 76.
C
q
q'
q''
D
O
A
p
p'
p''
B
X


A'
A
B'
B
Fig. 77.
M'
M
A
F'
F
Fig. 78.
Fig. 79.
E
G
K
A
B
H
C
D
X
Fig. 80.
F
B
D
R
C
F'
I
A
B'
C'
D'
Fig. 81.
R
D
F
B
I
C
F'
B'
A
D'
C'


Fig. 82.
D
B
C
I
A
B'
C'
D'
F
Fig. 83.
D
B
I
C
B'
A
D'
C'
F
Fig. 84.
B'''
B''
A'
B'
a
A
b
B
Fig. 86.
O
m'
p'
m
n
B
A
X
Fig. 85.
X
B
M
A'
G
A
O
M'
B'
X
Fig. 88.
C
B
O
A
Fig. 87.
B
b'
b
O
a'
a
A


Fig. 89.
C
I
B
D
O
A
Fig. 90.
C
H
B
O
I
D
A
Fig. 91.
A
I
B
O
Fig. 92.
m'
m
O
a'
a
A
n
n'
F,
Fig. 93.
F
A
x
m
O
X
x
Z
Fig. 94.
O
X
Y

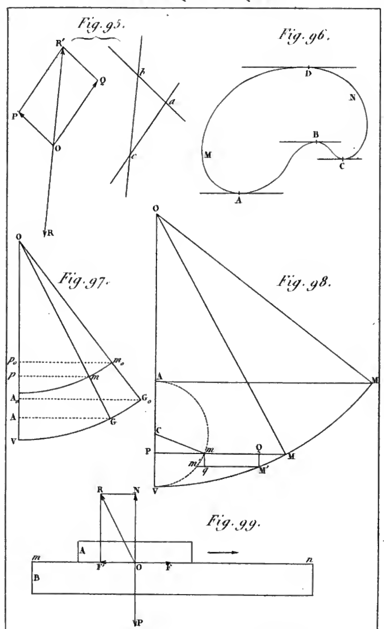
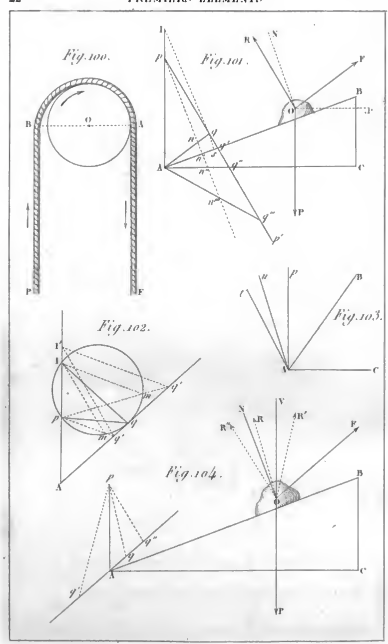
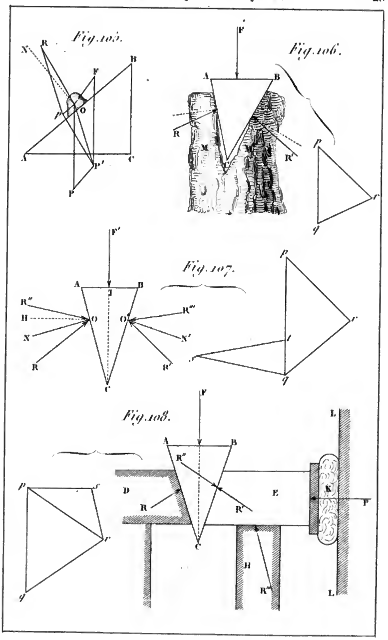
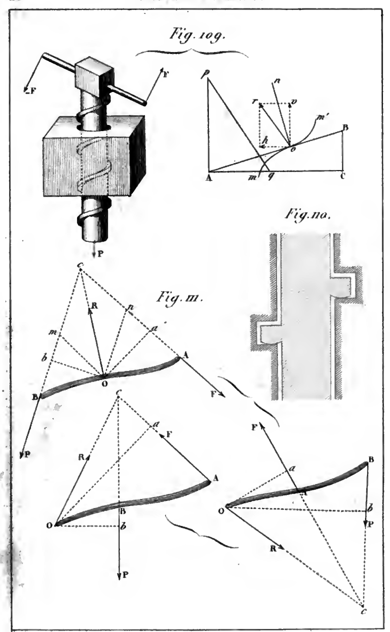
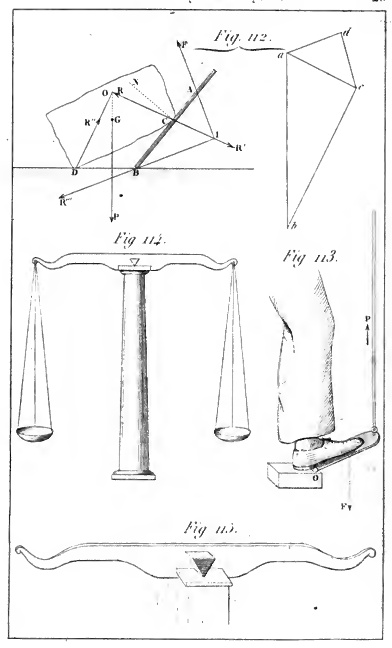


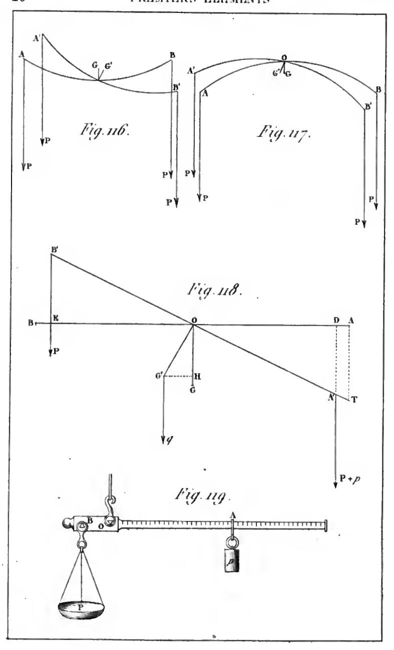
Fig. 95.
R'
Q
P
O
R
b
a
c
Fig. 96.
D
N
B
M
C
A
O
Fig. 97.
p_0
m_0
p
m
A_0
G_0
A
G
V
O
Fig. 98.
A
M
C
P
m
Q
M
m'
q
M'
V
R
N
Fig. 99.
A
m
n
F'
O
F
B
P

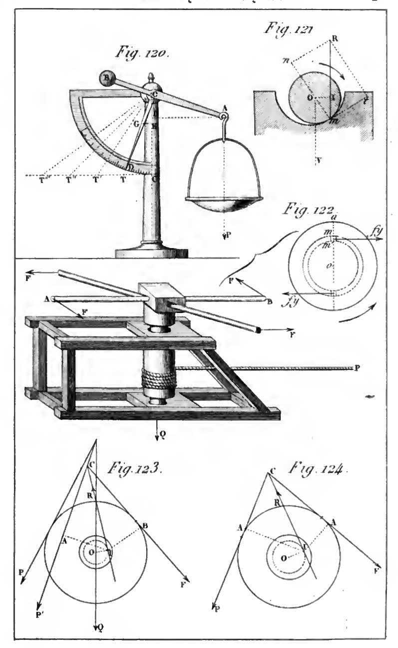

Fig.100.
B
O
A
P
F
Fig.101.
I
p
R
N
F
B
O
A
C
P
p'
Fig.102.
I'
I
q'
m
p
q
m'
A
Fig.103.
t
u
p
B
A
C
Fig.104.
V
N
R
R'
F
B
O
p
q''
q
A
C
q'
P

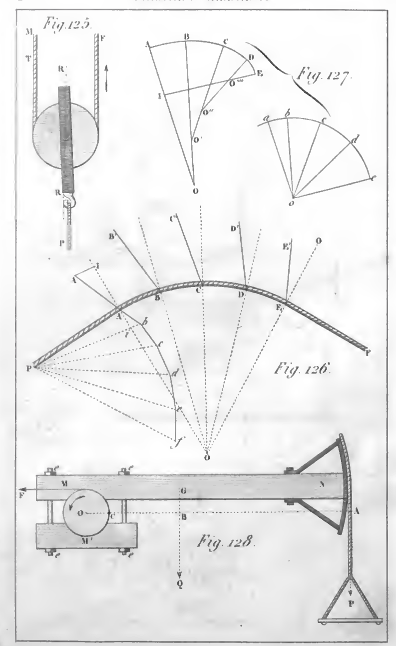

Fig. 105.
R
N
B
F
O
p
A
C
P'
P
Fig. 106.
F
A
B
R
M
M'
R'
p
r
q
F'
A
I
B
Fig. 107.
R''
H
O
O'
R'''
N
N'
R
R'
C
p
r
s
q
F
Fig. 108.
L
A
B
R''
D
K
E
R
R'
P
C
H
R'''
L
p
s
r
q

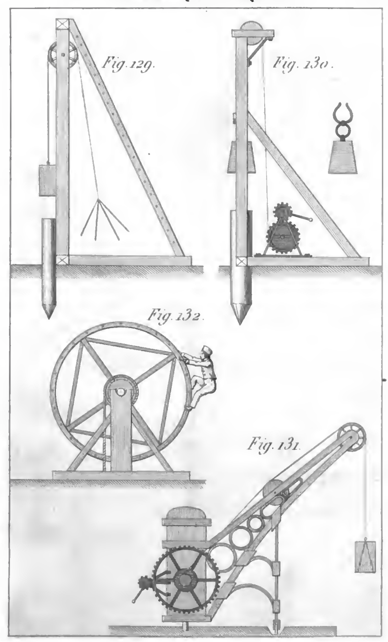

Fig. 109.
F
F
P
p
n
r
v
m'
B
h
o
A
m
q
C
Fig. 110.
Fig. 111.
c
R
n
m
a
b
A
O
B
F
P
c
a
F
R
A
B
O
b
P
F
B
a
A
O
b
P
R
c

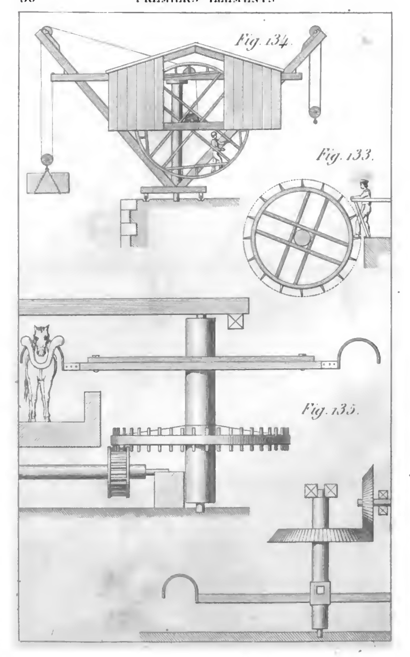

Fig. 112.
F
a
d
N
O
R
A
c
R''
G
C
I
R'
D
B
R'''
P
b
Fig 114.
Fig 113.
P
O
F
Fig 115.

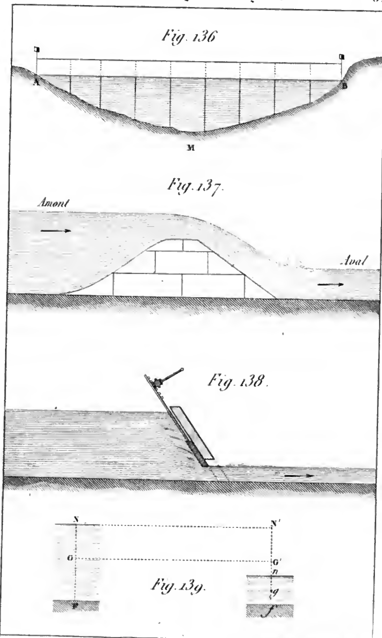

A'
A
G
G'
B
B'
P
P
P
P
Fig. 116.
O
A'
G'
G
A
B
B'
P
P
P
P
Fig. 117.
B'
Fig. 118.
B
E
O
D
A
P
G'
H
G
A'
T
q
P + p
Fig. 119.
B
O
A
p
P

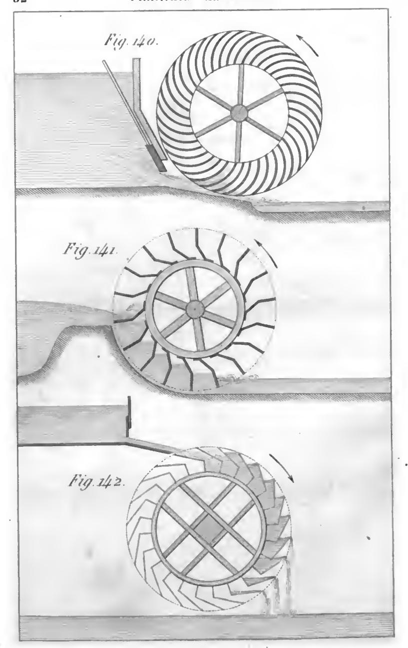

Fig. 120.
Fig. 121
Fig. 122.
Fig. 123.
Fig. 124.

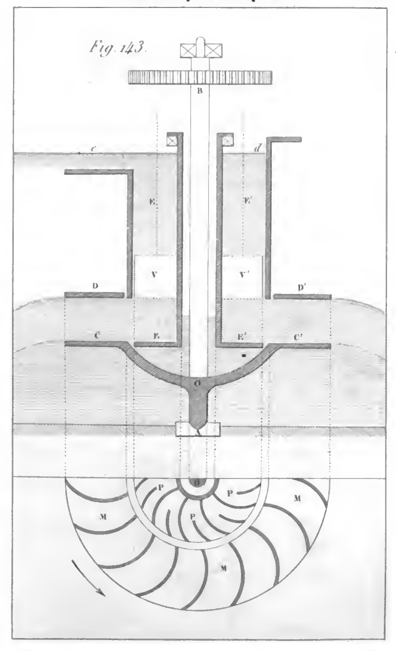

Fig. 125.
Fig. 127.
Fig. 126.
Fig. 128.


Fig. 129.
Fig. 130.
Fig. 132.
Fig. 131.


Fig. 134.
Fig. 133.
Fig. 135.


Fig. 136
A
B
M
Fig. 137.
Amont
Aval
Fig. 138.
N
N'
G
G'
n
g
F
f
Fig. 139.


Fig. 140.
Fig. 141.
Fig. 142.


Fig. 143.
B
c
d
E
E'
V
V'
D
D'
C
E
E'
C'
O
P
P
P
M
M
M
O

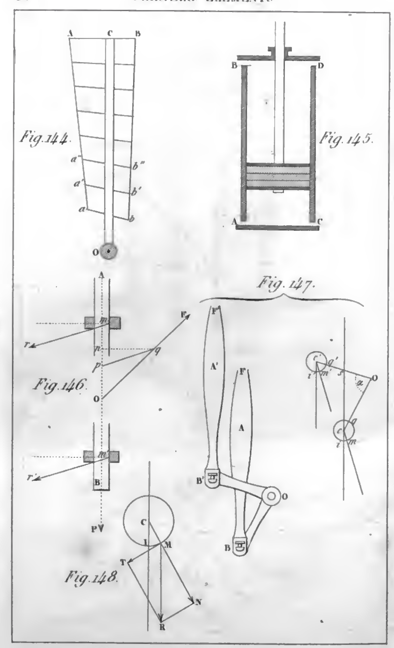
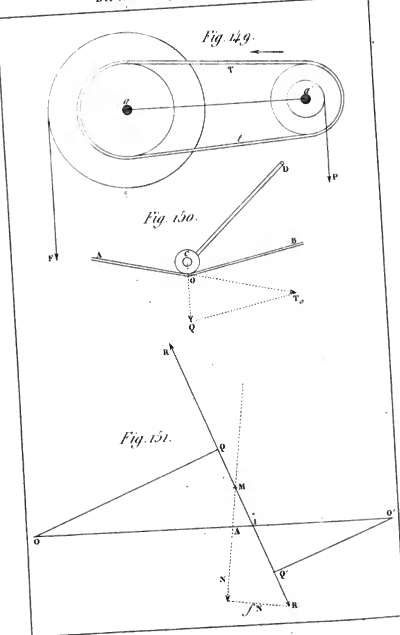
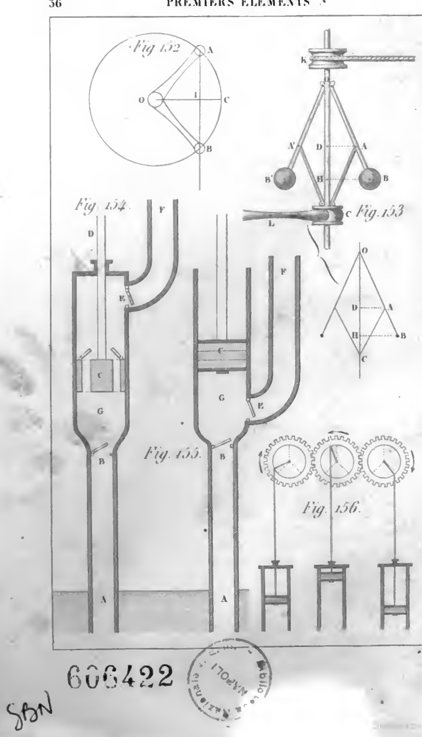
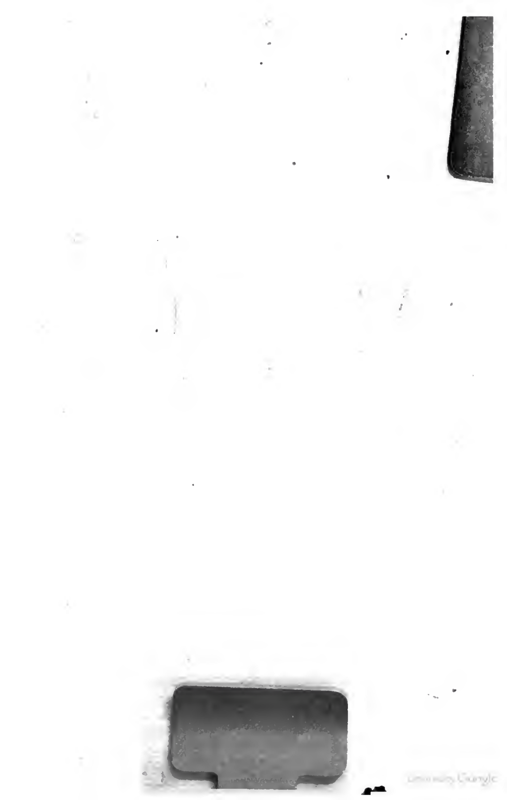


Fig. 144.
Fig. 145.
Fig. 146.
Fig. 147.
Fig. 148.


Fig. 149.
T
a
a'
t
P
F
Fig. 150.
D
C
A
B
O
T0
Q
R
Fig. 151.
Q
M
I
O'
O
A
Q'
N
R
fN


Fig 152
A
O
I
C
B
K
A'
D
A
B'
H
B
Fig. 153
L
c
O
D
A
H
B
C
Fig. 154.
F
D
E
C
G
B
A
F
C
G
E
Fig. 155.
B
A
Fig. 156.




BIBLIOTECA
NA
B.
2
N